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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/458,917	12/10/1999	MARTIN E. NEWELL	07844-353001	9475

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FISH & RICHARDSON P.C.
500 ARGUELLO STREET
SUITE 500
REDWOOD CITY, CA 94063

EXAMINER
SAJOUS, WESNER

ART UNIT	PAPER NUMBER
2676	

DATE MAILED: 01/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
09/458,917	Newell et al.
Examiner	**Art Unit**
Wesner Sajous	2676

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *10-01-2002, and 11-20-2002* .

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-17, 23, and 24* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-17, 23, and 24* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)
16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
18) ☐ Interview Summary (PTO-413) Paper No(s). _____
19) ☐ Notice of Informal Patent Application (PTO-152)
20) ☐ Other:

DETAILED ACTION

Remarks

This communication is responsive to the amendment dated October 01, 20, and the "Request For Continued Examination" (RCE) filed on November 2002. By this communication, claims 1-17 and 23-24 are pending in the application. Claims 18-22 are canceled.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11-20-2002 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior

art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-13, 15-17, and 23-24 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over . Broekhuijsen, Pat. No. 5731820.

Considering claim 1, Broekhuijsen discloses a method comprises "receiving relocation information indicative of an intended change in position of a target location on a Bezier curve shape.... governed by control points" (is equivalently met by fig. 1, item 202, with the arbitrary point is for example point 418 of fig. 4, see col. 13, lines 18-20); and "in response to the relocation information" (i.e., editing feedback), "determining new positions for canonical locations on the Bezier shape based on predefined intended behaviors of the canonical locations with respect to the user-specified change in position, the positions of the canonical locations on the Bezier shape being predefined" (is equivalently performed by device 202, see col. 14, lines 40-65, wherein the positions for canonical locations (Pn to Pn+1 or 430-432, see fig. 4), and the predefined behaviors of the canonical locations are determined when the additional inputs are provided to change end point from 418/430 to 432 (col. 14, lines 50-54)).

It is to be noted that although Broekhuijsen provides no explicit recitation as to a change in position or relocation of a target location on curve 400, Broekhuijsen suggest that the curve is transformable (col. 14, lines 15-18), and that the processor may edit or change the curve in real

time in response to additional inputs representing new points to be included in the curve (col. 14, lines 39-41) or additional inputs for correction or editing provided as feedback (col. 14, lines 49-51). Thus, based upon this teaching, one of artisan skilled in the art would readily recognize and find it expedient to use the user-specified request of additional inputs for editing to relocate or change the position(s) of a target point on the Bezier shape to a new location, i.e., point 430 to 432.

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the features of Broekhuijsen as such, wherein the relocation information is indicative of a user-specified change in position of any arbitrary target location on a Bezier curve, is provided; in order to provide to the user an ability to continue or alter the curve interactively in real-time. See col. 5, lines 4-5.

Regarding claim 2, the claimed "shape is comprises a d-degree Bezier curve, d an integer greater than 1, governed by d+1 control points" is met by Broekhuijsen at cols. 15-16, lines 64-8.

In claim 3, the claimed "with d+1 canonical locations" is met by col. 21, lines 5-12, wherein the positions for canonical locations with respect to user-specified change in position, as stated above, are determined when the additional inputs are provided to change end point from 430 to 432.

Re claim 4, the claimed "adjusting the control points so that the Bezier shape contains the canonical locations in their new locations," is met by fig. 1, item 202 in view of fig. 4, item 430 and 432, see col. 14, lines 49-53.

In claim 5, the claimed "Bezier shape comprises a curve or a surface" is met by either of figs. 2-4.

In claim 6, the claimed "rendering the Bezier shape based on the new positions of the d+1 canonical locations" is equivalently met by fig. 1, items 202 and 210. See col. 21, lines 5-12.

As per claim 7, the claimed "target location in its changed positions lies on the rendered Bezier shape" is intrinsic to the disclosure at fig. 4. See col. 14, lines 52-57.

Re claim 8, the claimed "predefined intended behavior is expressed in response functions that define the relationship between changes in positions of target locations and changes in positions of canonical locations" is characterized by the illustration provided at fig. 4, items 418/430, and 432, see col. 14, lines 49-53.

Regarding claim 9, it is noted that all the steps recited herein are steps necessary for implementing the curve fitting system, as applied in fig. 4 of Broekhujsen and would have been obvious over the prior art at the time of the invention was made, in order to transform the Bezier shape. Such technique is well known in the art for manipulation of B-Spline curves in two or three dimensional tensor product surfaces manipulation. See fig. 4, 24, and 27-28, and col. 14, lines 30 through col. 25, line 67.

Re claim 10, the claimed "Bezier shape comprises a d-degree curve, the one end and the other end comprise end points of the curve, and the target location comprises a point along the curve" is met by fig. 4, with the one end and other end with end points of the curve are defined by Pn/430 and Pn+1/432, respectively, and the target location is characterized by point 418.

As per claim 11, the claimed "Bezier shape comprises a 3-degree curve and there are four canonical locations" is equivalently met by the teaching at col. 8, line 4, and col. 16, lines 1-35, with the 3-degree curve being defined by the cubic Bezier curve represented by d+1 points.

As per claim 12, the claimed "Bezier shape comprises a 2-degree curve and there are four canonical locations" is obviously met by the teaching at col. 16, lines 1-35, the degree level of the curve is determined upon the user's preference.

Re claim 13, the claimed "The control points are adjusted using a pre-computed basis coefficient matrix" is met by cols. 14-15, lines 15-62, wherein the pre-computed basis coefficient matrix is characterized by the building variables 414. See fig. 11.

In claim 15, the claimed "processing the relocation information as a series of curve relocations" is met by fig. 1, item 202.

Claim 16 recites features equivalent to and performing the functions of claim 1, and is, therefore, subject to rejections for the same reasons and rationale set forth for claim 1, because the system of Broekhujsen is computer implemented.

Considering claim 17, Broekhujsen sets forth the following claimed features:

a) the claimed "receiving relocation information indicative of an intended change in position of a target location on a Bezier curve shape.... governed by control points"(is equivalently met by fig. 1, item 202, with the arbitrary point is for example point 418 of fig. 4, see col. 13, lines 18-20);

b) the claimed "in response to the relocation information, "determining new positions for canonical locations on the shape based on predefined intended behaviors of the canonical

locations including functions for expressing the predefined intended behaviors in scaled response functions that define the relationship between changes in positions of target locations and changes in positions of canonical locations"is equivalently performed by device 202, see col. 14, lines 40-65, wherein the positions for canonical locations (Pn to Pn+1 or 430-432, see fig. 4), and the predefined behaviors of the canonical locations are determined when the additional inputs are provided to change end point from 418/430 to 432 (col. 14, lines 50-54)); c) the claimed "adjusting the control points so that the Bezier shape contains the canonical locations in their new locations," is met by fig. 1, items 202 and 208 in light of fig. 4, items 430-432, see col. 14, lines 49-53; and the claimed "rendering the Bezier shape based on the new positions of the canonical locations so that the target location in its changed positions lies on the rendered Bezier shape" is met by fig. 1, item 210 in view of fig. 6.

It is to be noted that although Broekhuijsen provides no explicit recitation as to a change in position or relocation of a target location on curve 400, Broekhuijsen suggest that the curve is transformable (col. 14, lines 15-18), and that the processor may edit or change the curve in real time in response to additional inputs representing new points to be included in the curve (col. 14, lines 39-41) or additional inputs for correction or editing provided as feedback (col. 14, lines 49-51). Thus, based upon this teaching, one of artisan skilled in the art would readily recognize and find it expedient to use the user-specified request of additional inputs for editing to relocate or change the position(s) of a target point on the Bezier shape to a new location, i.e., point 430 to 432.

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the features of Broekhuijsen as such, wherein the relocation information is indicative of a user-specified change in position of any arbitrary target location on a Bezier curve, is provided; in order to provide to the user an ability to continue or alter the curve interactively in real-time. See col. 5, lines 4-5.

The invention of claim 23, recite the underlying elements of method claim 1. As the various elements of claim 1 have been shown to be met by the teachings of Broekhuijsen, it is readily apparent the method disclosed by the applied prior art performs the recited underlying functions. As such the limitations recited in claim 23 are rejected for the same reasons given above for claim 1.

The invention of claim 24 recites features equivalent to and performing the same method as claim 23, and is, therefore, subject to rejections for the same reasons and rationale set forth for claim 23. Note that Broekhuijsen edits the curve implementing a cursor movement to move point 418 of 430 to point 432 which is intrinsic to dragging point 418 to a new location, i.e., point 432. See col. 17, lines 1-9.

Claim Rejections - 35 USC § 103

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Broekhuijsen in view of Hosya.

Regarding claim 14, Broekhuijsen discloses most claimed features of the invention, but he fails to teach the claimed-- forming a mesh on the surface and searching quadrilaterals of the mesh--.

Hosoya at figure 16B and/or figure 5B shows the forming of a mesh on the surface including results of quadrilaterals searched of the mesh. See col. 2, lines 58-65.

Therefore, it would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify Broekhuijsen by incorporating the forming of a a mesh on the surface including results of quadrilaterals searched of the mesh, as taught by Hosoya's col. 2, lines 58-65, in order to make it possible to produce an enlarged or compressed character or the like having a smooth contour without sacrificing the quality. See Hosoya's col. 1, lines 33-36.

Conclusion

Any response to this action should be mailed to :

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Washington, DC 20231

or faxed to:

(703) 872-9314 (**for Technology Center 2600 only**)

0r:

(703) 308-5359 for informal or draft communications, please label "PROPOSED" or DRAFT")

Hand-held delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA , 6th floor (receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wesner Sajous whose telephone number is (703) 308- 5857. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached at (703) 308-6829. The fax phone number for this group is (703) 308-6606.

Wesner Sajous -WS

January 22, 2003